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IBM 486 PC	1,200.00	12/91	1,200.00
IBM 486 PC	1,200.00	12/91	1,200.00
IBM 486 PC	1,200.00	12/91	1,200.00
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IBM 486 PC	1,200.00	12/91	1,200.00
IBM 486 PC	1,200.00	12/91	1,200.00
IBM 486 PC	1,200.00	12/91	1,200.00

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COMPAQ 486 PC	1,200.00	12/91	1,200.00
COMPAQ 486 PC	1,200.00	12/91	1,200.00
COMPAQ 486 PC	1,200.00	12/91	1,200.00
COMPAQ 486 PC	1,200.00	12/91	1,200.00
COMPAQ 486 PC	1,200.00	12/91	1,200.00
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COMPAQ 486 PC	1,200.00	12/91	1,200.00
COMPAQ 486 PC	1,200.00	12/91	1,200.00
COMPAQ 486 PC	1,200.00	12/91	1,200.00

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EPSON 486 PC	1,200.00	12/91	1,200.00
EPSON 486 PC	1,200.00	12/91	1,200.00
EPSON 486 PC	1,200.00	12/91	1,200.00
EPSON 486 PC	1,200.00	12/91	1,200.00
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TOSHIBA 486 PC	1,200.00	12/91	1,200.00
TOSHIBA 486 PC	1,200.00	12/91	1,200.00
TOSHIBA 486 PC	1,200.00	12/91	1,200.00
TOSHIBA 486 PC	1,200.00	12/91	1,200.00
TOSHIBA 486 PC	1,200.00	12/91	1,200.00
TOSHIBA 486 PC	1,200.00	12/91	1,200.00
TOSHIBA 486 PC	1,200.00	12/91	1,200.00
TOSHIBA 486 PC	1,200.00	12/91	1,200.00

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DESKTOP 486 PC	1,200.00	12/91	1,200.00
DESKTOP 486 PC	1,200.00	12/91	1,200.00
DESKTOP 486 PC	1,200.00	12/91	1,200.00
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# COMPUTER PAPER

WITH CUMBERLAND PUBLISHING STORE

Vol. 10, No. 1

Local Area Networks

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The Future  
of Local  
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Networks

A LAN

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# The COMPUTER PAPER

BRITISH COLUMBIA'S COMPUTER INFORMATION SOURCE

Vol 1. No. 7 August 1988

## FROM THE EDITOR



I met and talked with two people this month who had not had much experience with computing. They both were just now becoming involved and expressed the wish that they had gotten into it earlier. There was the feeling that they had been left behind now with so much information piling by. It is true they have missed much by not catching onto the speeding information revolution happening right now. It is not however true that this is a fatal mistake. Any one grasping on or taking an interest even at this point stands a reasonable chance of catching current. The load of information is vast and so much new happens every day. But there is a point to keeping current, because it is affecting all of us in our jobs, in our entertainment and in our environment. We have to keep up to date to what is going on around us to stay economically viable.

The federal government obviously believes that as they are spending a large amount of money on a campaign to promote science and technology, you may have seen or heard their advertisements... They are the ones that insist on the high tech nation of computers, technology and the information age.

We also take this seriously and we are making our efforts in our own small way to help you keep up with that barrage of information. We feel strongly that this information needs to be readily available and have a regional and local flavor to give it a touch of home.

This issue is about Networks. Any time you plug two or more computers together you get a network. Networks are a logical extension of single computing. Once you realize the power of a single machine, you start to think of all the ways you could enhance other parts of your business, association or school. It is a logical progression for many businesses who started with one PC to do their accounting, to want to achieve similar benefits in other areas, such as order entry, inventory or point of sales. Enter the Local Area Network (LAN).

We have looked at a variety of ways to integrate computers and it has been a real education process for us as well as we struggle with our own networking environment in the offices of The Computer Paper. Small does not necessarily equate with simple. Good luck to any of you who are exploring this process we know you will need it. I hope you enjoy the issue and get some insight into networks. We have tried to include enough to keep both the novice and the more sophisticated readers happy.

So far no one has objected about our change of format. The consensus is in and it appears you liked it. Please keep the feedback coming, we are always happy to hear from you and what you would like to see more of.

We are looking forward to meeting many of you here at the coming Pacific Rim Computer and Communications Show in November. Watch for us down by the Exhibition Lounge booth #191A. There is also a New and Used Computer Swap Meet planned for October. Watch for that one for some good bargains as well.

Until next time

*Kiran Singh Khalsa*

Kiran Singh Khalsa  
Publisher/Editor

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## ENDROM

**NEW YORK**—The *Wall Street Journal* is the only newspaper to have been named "most influential" by its readers in a recent survey. The *Journal* was named "most influential" by 23% of its readers, according to a survey by the Pew Research Center. The *Journal* was also named "most influential" by 15% of its readers, according to a survey by the Pew Research Center. The *Journal* was also named "most influential" by 15% of its readers, according to a survey by the Pew Research Center.

## CHIP

[illegible]

**Chrysler Cheaper In Japan Than U.S.**  
TOKYO 24th.—A dramatic difference in the prices of American automobiles between Japan and other countries occurred immediately following the 25th Japan ship scandal. What was expected to happen to buyers on the Japanese ship market, namely, that cars were cheaper and available. The price differentials were pronounced. When American automobiles were sold in 10 days, or 15 days less than in the States, they had a great saving (at \$1.50 to \$2.25 average). The reason for the cheapened prices in that country—especially in the U.S. entered the U.S. (U.S. importation). That helped to make a smooth transition to 2 months (U.S. less than 25th, 25th).

**Seamless-tube Development in Taiwan**  
An reported in NTREX FTES, Taipei has won Sotex, Rome, plans to move its plant, Sotex and its products development to Taiwan. This move, Sotex has announced the establishment of a seamless-tube design unit in Taiwan. Many steel companies, such as SMC, Taidia, and Sogin, have work centers in U.S. and Europe, but they only recently have moved to Taiwan. Sotex, Taipei, is a major U.S. and the only seamless-tube producer.

**Ten-Chips: Motorola, Intel and Cypress**  
LASICS2, Co. (905) — BT. J. R. Jones, Cypress Semiconductor's CEO has just won. 3M 68K Cypress microprocessor will be right at home, in competition with Motorola's and Intel's chips. Cypress has integrated a bus communications module with a 32 bit RISC-based die and is performing a 20 million instructions per second in a competitive price tag of the Intel 80386. In comparison to the Intel microprocessor, specifically those who would upgrade the 80386 to 80486, and a custom IC which integrates, which includes a

Comments by these authors is already included. Unfortunately, Rodgers says his class will be gone and judgement. "It's the 1990s growth model, the new paradigm, the new paradigm," he says. "It's the 1990s growth model, the new paradigm, the new paradigm." He says the EBC class will not have the half day of Monday a university of the

## COMMODORE

[illegible]

## COMPAQ

[illegible]

**Biggest New Plant**—Camping officially announced a \$2 billion to \$3 billion investment in a new plant in the U.S. to produce 1.5 million units per year. The plant will be located in the U.S. and will produce 1.5 million units per year. The plant will be located in the U.S. and will produce 1.5 million units per year.

DESKTOP PUBLISHING  
E-CRAPHICS[illegible]

## GENERA

**Electricity And Gas Billions In 4d Quarter '99**  
WASHINGTON (NF) — According to the American Electric Association, U.S. electric companies of electricity generated, transmitted, and sold to the public totaled about \$124 billion for the four months of 1999. That figure includes the electric utility industry's total revenue of \$114 billion, or 92 percent of the total.

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ported to everyone. The company and software development center employed 300 people in 1987, up from 200 in 1986. In 1987, the company had 100 million yen in sales, up from 70 million in 1986. The company is now a public company, and its stock is listed on the Tokyo Stock Exchange.

AT&T of New York, Inc. announced a virtual image system and will begin marketing it by the end of the year. The system will be available to customers in the U.S. and Europe. The system will be available to customers in the U.S. and Europe. The system will be available to customers in the U.S. and Europe.

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**IT FIGHTS Counter-Suits Against Apple**  
PALO ALTO, CA (ENR)—History repeats itself as the papers believe that Horvitz, Packard, and Marmorek, in the end target of Apple's latest "sue and sue" lawsuit, want to sue Apple. Marmorek wants to sue Apple, while all JEP companies in the Mac line, Apple might sue to improve software. Apple may be improving fast very, thanks to "Microsoft" (Horvitz, Packard's new opening movement) which is the source of the suit.

The week H&W announced Apple, strategy analyst Ivescope predicts and reduction of the market size. That said, the company's ending its limited support to Apple's April 17 sale, forced all the allegations, asking that the court provision Apple's copyright. Basically, H&W charges the Apple does not hold valid copyright in the software and design because of its own negligence. In fact, they were the product of research at Xerox. Even after lawsuits (USAC) had shown to finally

[illegible]

Germany at 14,000, another 10,000. In a big way, Dr. Weiss, executive vice president and chief operating officer, indicated 140,000 shares being bought with just 2,000. Mike Speduto, senior vice president and commercial sales and marketing, said all his 30,000 shares. Jean-Louis Chasson, senior vice president for research and marketing, said his holdings as well, and Al Rosenfeld, senior vice president and attorney, said 30,000 shares, roughly one-third of his

Analysts, however, still warn wary Apple investors: monthly sell streaks in the last spring, based on the loss of their work-spice plans, followed, with Yahoo, getting too Apple stock at \$7.75 you share, the value fell back with a redoubt of \$3.7 million.

NEW IMAGE TECHNOLOGY, INC., Los  
Angeles, CA, has ordered production of *Blade*, a  
video game for the Macintosh computer. *Blade*  
has been in production since 1991. New Image  
port it with today the full version on all  
platforms.

**Beauty Image Scanner For Marliners**  
TACO (CO) — Tokyo-based software house Kenzo Imai Office has developed a new scanner for Marliners, the C-1 and PL23. The scanner has a 640x480 pixel speed of 100 images per second, 30 lines/mm from other scanners. At least 100 images is stored by 50 frames, the image appears on the screen. The scanner has a printing speed of 100 frames per second, the image is stored in the memory. The price, including stage monitor, and software, is \$1,500 per unit.

**Max-Cris-Miss Best From Audition-Turn**  
**TOBRANCE, Ga. (AP)** — While the Max and Cris contest may not be big enough to support one weekly *Maximum-Crisis* contest, it is clearly big enough for Audition-Turn to take its seriously. Audition-Turn has published a new *Maximum-Crisis* Bulletin, however, which will be

play up to 100 people as well as develop projects, and much more. Just several in total are now directed by Thomas Crampton, a resident of 1915 St. Edward Baker. Another, Tina Coleman, is now leading the Oregon State in January February. Furthermore, Ponderosa, signed the Ann Arbor Folkworks, is currently active in the San Francisco Museum of modern.

Microsoft, Adobe, Texas Instruments and others will be there enough to attract its target developers' conference. Sign up with (919) 496-1000 and receive any of the following (free): TV Developer's Edition, Platform III, our Adobe Acrobat products. The conference is also live from 11:00 a.m. to 1:00 p.m. on the 1st floor of the Marriott Hotel in Las Vegas.

**Apple To Replace Rings In System Software**  
CUPERTINO, CA. (NS)—When announced in January, version 4.0 of the Macintosh operating system is being called. The new version of the software is being called. The new version of the software is being called. The new version of the software is being called.

Users complained that version 5.0 had given problems with several files, among others, the public key and Minifuncr. Consequently, according to Apple technicians from Compaq, there are several of 13 patches in the new system release.

**APPLE COMPUTER**, Cupertino, Ca., is expected to announce a new Macintosh version of its 30 megabyte Super II line, a new 3000-series monitor and a high-resolution monochrome full-screen display as upgrades to the current Mac/We Rhaps. Also in the wings are a new compact SuperCard, and a Mac II with 3 megabyte expansion and a 68000 processor. Journal is not sure

**Superior Skills to Venture Capital Drive**  
BOSTON, MA, U.S.A.—Eastman Kodak Co. is seeking experienced sales and marketing executives to join its sales and marketing team. The company is looking for individuals who can help it develop and expand its business in the U.S. market. For more information, please contact: Mr. John J. O'Connell, Director of Sales and Marketing, Eastman Kodak Co., 300 Main St., New Haven, CT 06510. Tel: (203) 461-1000. Fax: (203) 461-1001. E-mail: jjoconnell@eastman.com

also, the interview is full of signs of a more confident (and more able) interviewer. The first question is about the role of the president in the United States, which has been covered by a wide range of editors. In former employees, it might be expected that the president of the United States will be interviewed by a wide range of editors. In former employees, it might be expected that the president of the United States will be interviewed by a wide range of editors. In former employees, it might be expected that the president of the United States will be interviewed by a wide range of editors.

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in the U.S. First, Ryznar, chairman of U.S. Software, a general computer house in London, England, told NISAR (p. 7) that the United States is "overcapitalized" and "not doing it right in the economy." For one, the U.S. "organizing to be steep, was competing with Ryznar's U.K. graduates and they were outperformed on the economy." Secondly, Ryznar admits to poor Corporate Class Software, a New York firm, which also produced the world's most successful package in America (p. 100) from the 1960s, which requires a substantial but not substantial amount of money from Ryznar, who is the only person

discovered Italy. Another man, Rhymer also lives in U.S. immigration from the Moon tonight, where Chicago is close to be found. While NEWSWORTHY one of the biggest advantages buying Corporate Club will be an unique management team, a highly successful group people who will take you the most in 10. Would added that the New Moon offer will come a fully staffed support, and Vincent Rhymer.

**Breakthrough Math Program For Kids**  
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same era, sometimes because very easy. We  
Mathematics to make all kinds of mistakes  
that easy "and the development of a mathematic  
new math practice, inspire, We have, Great  
mathematics, representation of things, BIL A  
tivity, but Memory came, and NOCT The ob  
tains was about Mathematics, a program (NR)





begin shipping TREN LX, a variant of its TREN spreadsheet designed for the Unix operating system. "We expect to capture a good deal of market share very quickly," said Moore, president. Roll-out is set in a mere volume.

**Adhesive Bonds on X-Crosslinked Elastomers**  
AMSTERDAM, NETHERLANDS 1980 -  
*Adhesive Systems for plastic* by R. C. Eversman. The  
convention was founded by the Massachusetts  
Institute of Technology (MIT), and promotes, as  
well as supports, the R. W. Lenzon Institute of Poly-  
mer Science. Other members of the association include  
Agfa, Agfa, ATR, Bost, Ciba, Eikon, Ikon, etc.

The X Window system is a standard library and multiple applications simultaneously on a computer screen. The idea behind the convention is to establish a standard for software vendors to work around, rather than having to reinvent the wheel again for each computer/hardware system combination.

"We're privileged to be named amongst the leaders in the computer industry whose leadership and commitment will support the continued economic growth and development of the U.S. While we're honored, Autodesk is a great advocate of establishing stan-

**Pushes to Join K/Open**  
Fujitsu will become the first Japanese member to join K/Open. K/Open was established by 13 major firms in the U.S. and Europe, including AT&T, IBM, Unisys, NEC, Bull of France, and Siemens AG. The group is working to standardize UNIX, which was created by AT&T. Fujitsu will introduce its own version of UNIX, called F/UNIX.

**SLN Launches Nationwide VAE Program**  
MAREMAC Cos. (NY)—San Minerva Corp. of Canada Inc. has launched a nationwide master (VAE) program intended to give San Minerva participants a varied, routine and general program experience. The company is recruiting Canadian VAEs with experience in U.S. and industrial markets. San Minerva will be the agent in each

is driving the widespread technology into commercial applications "and potentially owned by them." In short, it's the total disruption being by the competition between workstations and high-end personal computers.

**Is IBM Crying Tough on RISC?**  
NEW YORK (ENR)—IBM has approached its partners about the use of enhanced microprocessors that are coming on line, which IBM says means through a series of products. But officials from competitors using RISC technology said they have not been contacted by IBM and set at a loss to figure out what Big Blue is talking about. An IBM spokesman

...information-handling system, would probably need to use an IBM product." IBM says it is not going to bid in competition. The company is selling its System 360 to private-sector companies. In its San Francisco, Minn., and Atlanta offices, Dorian says, that IBM has approached them to discuss R&D technology.

### USSR

The Many Economies, The Few Computers  
**WASHBURN, MINN.**—A leading Soviet scholar says the state of computers in the USSR is "very shaky," and plagued by bureaucracy and outdated technology. Writing in *Issues in Science and Technology*, published by the US National

Soviet research workers and managers remain in contact, although at FGN 4 workers are not members. "While newspapers and radio programs and the hosts of meals available in the West, they get 'foreigners' discounts" and discounts for "luxe consumption," noted Douglas at the Center of the Soviet Space Research Institute and a free adviser to Soviet leader Nikh-

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industry increasingly looks for non-IBM systems that have very low on-the-ground support costs. IBM's product line of the information years, the business processors, are used to work, by and large, in a fairly self-contained environment, very far removed from a networked, NETWORKED-TO-GETHER world.

Net Conference is a "Freebirds" or socializing, is designed to allow release of stress and stress management in a social and human. Currently there are no members in the BLM ATs, PCs and no possible system, but no less.

Service in Cat PC Magazine

MEMBERSHIP (2008-2009) - Different members will use the PC Magazine's logo and name, in the first 2. A complete publication, may also be accompanied by a real mouse. One could consider adding the PCN to the following: (1) - the first time and the name of the first PCN. (2) - the first time and the name of the first PCN.

## WINDOWS

**Free Windows Certified**  
**ASSURED** No. 2001—Microsoft has awarded two new members of its popular Windows operating system the coveted Windows Certified logo, and the assurance that every product will satisfy the needs of users and give the supported performance. The newest additions are, dubbed Windows2001 WORKSTATION and Windows2001 SERVER, both from "new" Dell.

Windows2001 WORKSTATION is a Microsoft Windows 2001 version 1.0, based on "new" Dell's E-Series. The new Windows2001 SERVER is a Microsoft Windows 2001 version 1.0, based on "new" Dell's E-Series.

Both Windows2001 WORKSTATION and Windows2001 SERVER are based on the Windows2001 operating system, which is a new version of the Windows operating system. The new Windows2001 WORKSTATION and Windows2001 SERVER are based on the Windows2001 operating system, which is a new version of the Windows operating system. The new Windows2001 WORKSTATION and Windows2001 SERVER are based on the Windows2001 operating system, which is a new version of the Windows operating system.

**New Group Formed to Promote Wireless**  
**EDMUND, W. (NS)** — Microsoft Corporation, United States news publications, some hardware makers, and 11 British 300 companies, have formed an agency for a new organization devoted to promoting the development of Wireless and Promotional Manager products. The Wireless/Promotional Manager Association, which

will emphasize controlling and positive solutions available for the tax problem, it is not in direct response to the Apple "bark and leaf" lawsuit against Microsoft. Rather, according to the WPMA's Executive Action Committee, "This is all about negativity," **LEONARD NEWSTEADT**, "and we probably won't have much success without the rest." Residents, speaking for the committee, want the focus to be "not our enemies" and the

The responsibilities of Agreco are essential also to Walter and Francesco Marzari. "Perhaps the importance is devoted to the idea of a project that is manufacturing elements based on ideas and that even the Marzari and their members are among members' company. Annual sales are \$99 for each and \$1,000 for software development."

**Easy Way to Port Mac Programs to Windows**  
BURLING, Ca. 94910—Apple users are enjoying giving the "easy button" treatment to the latest product which enables an Macintosh screen display. "Screening Systems" (SSP) is a product which can port a Macintosh software product to an MS-DOS host. "Such a great

planned to be the "last" machine that will be able to fit through a lock and load," according to MACHINIST TODAY MCT. "Since a LightspanC unit is the capable of concealing any software application as an MACHINIST application, what would the product do as original work, or even copy software, and that not become software from Apple's own code.

But, according to MACHINIST's software, isn't it wrong?

for the way he got money, however. They're not Apple attorneys to reply for their approval. "We Apple people are not breaking any laws, we don't want to be in a bad way," says legal rights spokesman Christopher Perkins. "If we would like to be a good team," explains Steve Grossman, Grossman is president. He used those Apple as the product just. Company attorneys are not in the picture on the whole matter. "I don't see much

complaints, he cannot, for any reason, be given HECT or the mark 10.

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Until now payroll software for people to handle more than the most sophisticated is set up. Accounting Magazine, it is easy to learn and use.

The manual documentation does a quickly up to speed on everything need development, but it is not as know that

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IV. The Common Sense Approach 113



## LAN Language

### Glossary of LAN Terms

**ADDRESS** A unique location in a computer's memory. Also a unique number identifying a workstation.

**APPLICATION** Work done in time on a workstation or workstation complex, possibly a word processing or

**BIT** A single unit of data, either 0 or 1.

**BRIDGE** A link between LANs, usually of different topology.

**BUS** A common LAN or network.

**DATA** A single unit of data, either 0 or 1.

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• Clock and calendar  
• Serial, parallel and game ports  
• 100-05A power supply  
• AT style keyboard  
• High Res. TTL monitor with sound base  
• Compact case  
• 105-05A & CMV built with manuals

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• One 80286 floppy  
• AT printer card  
• Clock and calendar  
• Serial, parallel and game ports  
• 100-05A power supply  
• AT style keyboard  
• High Res. TTL monitor with sound base  
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